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| Notice of Allowability | Application No. | Applicant(s) | |
| | 10/798,058 | MATHIS, JOHN P. | |
| | Examiner | Art Unit | |
| | Robert B. Mondesi | 1652 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed September 29, 2006.
2. ☒ The allowed claim(s) is/are 1,3 and 9-15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date <u>20061113</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michelle L. Cunningham on December 7, 2006.

The application has been amended as follows:

In the specification on page 4, line 16 insert the following paragraph:

Access to the deposit will be available during the pendency, and instant invention will be irrevocably and without restriction released to the public upon the issuance of a patent.

1. (Currently amended) An isolated nucleic acid molecule having a nucleotide sequence selected from the group consisting of:
 - a) the nucleotide sequence set forth in SEQ ID NO:1;
 - b) a nucleotide sequence encoding the amino acid sequence set forth in SEQ ID NO:2;
 - c) a nucleotide sequence having at least ~~about~~ 90 % sequence identity across the full length of the nucleotide sequence set forth in SEQ ID NO:1, wherein said nucleotide sequence having at least ~~about~~ 90% sequence identity to the nucleotide sequence set forth in SEQ ID NO:1 encodes a polypeptide having *Bacillus thuringiensis* (Bt) Cry 1A toxin binding activity;
 - d) a nucleotide sequence having at least ~~about~~ 95 % sequence identity across the full length of the nucleotide sequence set forth in SEQ ID NO:1,

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wherein said nucleotide sequence having at least ~~about~~ 95% sequence identity to the nucleotide sequence set forth in SEQ ID NO:1 encodes a polypeptide having *Bt Cry 1A* toxin binding activity;

- e) the nucleotide sequence of the cDNA insert of the plasmid deposited with the ATCC as Patent Deposit No. PTA-4935; and
- f) a nucleotide sequence complementary across the full length of at least one nucleotide sequence set forth in a), b), c), d), or e).

2. (Canceled)

3. (Currently amended) The nucleic acid molecule of claim [[2]] 1, wherein said nucleic acid molecule comprises a nucleotide sequence encoding a polypeptide having Cry1A(b) toxin binding activity.

9. (Currently amended) An expression cassette comprising at least one nucleotide sequence according to claim 1, wherein said nucleotide sequence is operably linked to a promoter that drives expression in an isolated cell of interest.

10. (Currently amended) The expression cassette of claim 9, wherein said isolated cell of interest is selected from the group consisting of insect cells and mammalian cells.

11. (Currently amended) The expression cassette of claim 9, wherein said isolated cell of interest is a microorganism.

13. (Currently amended) A transformed isolated cell of interest having stably incorporated within its genome a nucleotide sequence selected from the group consisting of:

- a) the nucleotide sequence set forth in SEQ ID NO:1;

- b) a nucleotide sequence encoding the amino acid sequence set forth in SEQ ID NO:2;
- c) a nucleotide sequence having at least ~~about~~ 90 % sequence identity across the full length of the nucleotide sequence set forth in SEQ ID NO:1, wherein said nucleotide sequence having at least ~~about~~ 90% sequence identity to the nucleotide sequence set forth in SEQ ID NO:1 encodes a polypeptide having *Bt Cry 1A* toxin binding activity;
- d) a nucleotide sequence having at least ~~about~~ 95 % sequence identity across the full length of the nucleotide sequence set forth in SEQ ID NO:1, wherein said nucleotide sequence having at least ~~about~~ 95% sequence identity to the nucleotide sequence set forth in SEQ ID NO:1 encodes a polypeptide having *Bt Cry 1A* toxin binding activity;
- e) the nucleotide sequence of the cDNA insert of the plasmid deposited with the ATCC as Patent Deposit No PTA-4935; and
- f) a nucleotide sequence complementary across the full length of at least one nucleotide sequence set forth in a), b), c), d), or e).

14. (Currently amended) The transformed isolated cell of interest of claim 13, wherein said transformed isolated cell of interest is a plant cell.

15. (Currently amended) The transformed isolated cell of interest of claim 14, wherein said plant cell is monocotyledonous.

Conclusion

Claims 1, 3 and 9-15 are allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert B. Mondesi whose telephone number is 571-272-0956. The examiner can normally be reached on 9am-5pm, Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on 571-272-0928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert B Mondesi
Examiner
Art Unit 1652

Robert B. Mondesi
12-07-06